

REMARKS

This is a Response to the Office Action dated May 1, 2006, in the above-referenced patent application. Claims 1-15 were pending in the patent application. Through this reply new claim 16 has been added, as a result of which claims 1-16 are now pending in the patent application.

Claims 8-15 were rejected under 35 USC 101 as being directed to non-statutory subject matter. Claims 8-15 have been amended herein to overcome the rejection.

Claims 1-5 and 8-13 were rejected under 35 USC 102(e) as being anticipated by Grauch (US2005/0235318A1).

Claims 6, 7, 14 and 15 were rejected under 35 USC 103(a) as being unpatentable over Grauch in view of Konig (6,981,040).

Rejections under 35 USC 102(e)

Rejection of claims 1-5 and 8-13 under 35 USC 102(e) as being anticipated by Grauch is respectfully traversed because Grauch does not disclose all of the claimed limitations.

As per independent claim 1, Grauch does not disclose a method of determining a television viewer's viewing habits, including the steps of recording a viewer's monitor behavior with data item variables selected from the group consisting of watch date, watch start time, watch duration, and watch channel. It is respectfully submitted that Grauch's channel ID, paragraph 56 (relied on by the Examiner), at a minimum does not disclose recording a viewer's monitor behavior with data item variables selected from watch date and watch duration.

Further, it is respectfully submitted that Grauch paragraphs 96, 98, and 99 (relied on by the Examiner), does not disclose: from a server-side system inputting historical data information regarding demographic information tagged to the viewer, as claimed. Rather, Grauch paragraphs 96, 98, and 99 mention sending viewer STB timelines to outside sources, rather than inputting historical data information regarding demographic information tagged to the viewer from a server-side system, as claimed.

Further, Grauch does no disclose using *historical data* information regarding demographic information tagged to the viewer. Rather, Grauch mentions targeting ads to particular demographic households.

Further, Grauch does no teach inputting program guide information, as claimed. In paragraph 60 (relied on by the Examiner), Grauch mentions EPG application 33 that records

application ID, timestamp and event ID records. However, there is no disclosure of inputting program guide information for association with other information.

Further, in paragraphs 65, 68, 86-88 and 98 (relied on by the Examiner), Grauch does not disclose the steps of associating the program guide information with the viewer's monitor behavior, and defining therefrom knowledge base with demographic cluster information of the viewer, as claimed. In paragraphs 65, 68, 86-88 and 98 (relied on by the Examiner), Grauch simply mentions event timelines 94 analyzed at a head end server (100 or 110) by running queries against the timelines (paragraph 96), to know which particular ads were watched by a customer base. Indeed, Grauch does not disclose defining a knowledge base with demographic cluster information of the viewer in terms of statistical state machine transition models, as claimed. Further, Grauch does not disclose performing such steps at a client-side system, as claimed, because Grauch performs analysis of timeline 94 at server-side systems (100, 110).

For at least these reasons, it is respectfully submitted the limitations in the rejected claims 1-5 are not disclosed by Grauch. For the foregoing reasons, and other reasons, Applicant respectfully requests that the rejection of independent claim 1, and therefore rejected claims depending therefrom (claims 2-5), under 35 USC 102(e) should be withdrawn. If claims 1-5 are once again rejected, Applicant reserves the right to provide further arguments in support of allowability of claims 1-5.

As per independent claim 8, it is respectfully submitted that in paragraph 33 (relied on by the Examiner), Grauch simply provides boiler-plate language but does not teach the claimed limitation of implementing instructions on a computer-readable medium, as claimed. Further, Grauch does not disclose capturing state transitions by defining monitor behavior in a plurality of statistical state machine families each representing a given viewer or demographic group viewing behavior, as claimed. In Fig. 7 (relied on by the Examiner), Grauch simply shows exemplary results of a merge and parse processing of events (paragraphs 31, 86). Fig. 7 does not disclose states, or state transitions in state machines, as claimed. Recording and merging of events in Grauch, has nothing to do with state machines, or capturing state transitions, as claimed. Grauch does not even mention state machines.

Further, it is respectfully submitted that in paragraph 65 (relied on by the Examiner), Grauch simply mentions that capacity of each of the memory buffers may be statistically provisioned. This has nothing to do with statistical state machine families, as claimed. What does buffer size in Grauch have to do with statistical state machine families, as claimed? Further, in paragraph 95 (relied on by the Examiner), Grauch refers to Fig. 7 showing a sample merge of event records. Again, there is no teaching or even mention of a state machine or capturing state transitions by defining monitor behavior in a plurality of statistical state machine families each representing a given viewer or demographic group viewing behavior, as claimed.

Further, it is respectfully submitted that Grauch does not disclose combining the statistical state machine families into global statistical state machines defined in a global probability density function, as claimed. As discussed, Grauch does not disclose statistical state machine families. Element MKIS 100 in Fig. 1 of Grauch (relied on by the Examiner), is a database that stores event records, and in paragraph 81 (relied on by the Examiner), Grauch mentions clickstream data flow through the system 20 wherein clickstream packets of event records are transmitted from each STB 30 to the network management controller 50, and then to the staging server 70 which couples to MKIS 100 and analysis engine 110. However, there is no teaching in Grauch of combining the statistical state machine families into global statistical state machines defined in a global probability density function. Where are such limitations disclosed on Grauch exactly?

Further, it is respectfully submitted that Grauch does not disclose updating and reinforcing the global probability density function upon determining that a given probability function has a higher confidence level than a previous probability density function, as claimed. Indeed, the Examiner has not provided any argument that Grauch discloses such limitations.

Further, it is respectfully submitted that Grauch does not disclose outputting a global profile based on the global probability density function, wherein the global profile is suitable for determining programming content of a television server, as claimed. In paragraphs 98, 99 (relied

on by the Examiner), Grauch mentions sending viewer STB timelines 94 to MIKS 100 or analysis engine 110 to running queries against the timelines (paragraph 96), to know which particular ads were watched by a customer base. However, there is no teaching in Grauch that a global profile that is based on the global probability density function is determined, or that such a global profile based on such a function is output that is suitable for determining programming content of a television server, as claimed. The claimed limitations of global probability density function, global profile, or determining programming content of a television server based on such global profile, are not disclosed by Grauch.

For at least these reasons, it is respectfully submitted the limitations in the rejected claims 8-13 are not disclosed by Grauch. For the foregoing reasons, and other reasons, Applicant respectfully requests that the rejection of independent claim 8, and therefore rejected claims depending therefrom (claims 9-13), under 35 USC 102(e) should be withdrawn. If claims 8-13 are once again rejected, Applicant reserves the right to provide further arguments in support of allowability of claims 8-13.

Rejections under 35 USC 103(a)

Rejection of claims 6, 7, 14 and 15 under 35 USC 103(a) as being unpatentable over Grauch in view of Konig is respectfully traversed because for at least the following reasons, the references, alone or in combination, do not disclose all of the claimed limitations.

As per claim 6, as discussed above, Grauch does not disclose limitations of the base claim

1. Further, as the Examiner also stated, Grauch does not disclose parameterizing the viewer's monitor behavior with a double random pseudo hidden Markov process, and defining a low-level statistical state machine modeling a behavioral cluster and a top-level statistical state machine with active behavioral clusters and an interaction between the active behavioral clusters, as claimed. Further, it is respectfully submitted that Konig does not disclose the claimed limitations.

Konig is non-analogous art. Konig is directed to a method that predicts user interest in documents and products over a network by using a learning machine that is continually updated based on the user's actions. This has nothing to do with the claimed invention which utilizes user's viewing habits and locally obtained information (EPG, date, time, previous habits, etc.) to determine programming content.

Further, it is respectfully submitted that despite the Examiner's interpretations, Konig does not disclose all of limitations of claim 6. For example, Konig col. 28, lines 14-18 (relied on by the Examiner), parameterizing the viewer's monitor behavior with a double random pseudo hidden Markov process, as claimed. In col. 28, lines 14-18, Konig states: "The term $P(q|d)$ represents the probability that an average user with an information need of d expresses it in the form of a query q . One possible implementation of the latter two terms uses the Hidden Markov Model...." However, as is glaringly obvious, there is no mention in Konig of parameterizing a

viewer's monitor behavior, or parameterizing a viewer's monitor behavior with a double random pseudo hidden Markov process. Further, the term $P(q|d)$ as defined in Konig (i.e., the probability that an average user with an information need of d expresses it in the form of a query q) has nothing to do with a viewer's monitor behavior, or parameterizing a viewer's monitor behavior, as claimed. Further, it is respectfully submitted that just because Konig mentions a Hidden Markov Model, that does not mean that Markov discloses the claimed limitations.

Further, it is respectfully submitted that Konig does not disclose defining a low-level statistical state machine modeling a behavioral cluster, as claimed. The Examiner refers to Konig col. 14, "lines 61-52" (page 8 of the office action), which seems to be a type but nevertheless Applicant cannot use to respond to the Examiner.

Further in col. 27, lines 1-11 and 49-55 (relied on by the Examiner), Konig does not disclose defining a low-level statistical state machine modeling a behavioral cluster, as claimed. In col. 27, lines 1-11 and 49-55, Konig mentions estimating probability that a user is interested in a document or product, wherein user response to a service is monitored to obtain samples to update a user model. However, there is not even mention of a state machine in Konig. Nor is there a mention in Konig of a low-level statistical state machine, as claimed. Further, there is no mention of a state machine that models a behavioral cluster, as claimed. A user model is not a behavioral cluster as claimed.

Further, it is respectfully submitted that Konig does not disclose a top-level statistical state machine with active behavioral clusters and an interaction between the active behavioral clusters, as claimed. In col. 29, lines 49-52 (relied on by the Examiner), relied on by the Examiner, Konig mentions that: “The linked documents are located in step 214 (but not shown to the user), and evaluated with the User Model (214) to estimate the user's interest in each of the linked documents.” However, as the passage in Konig shows, there is no teaching in Konig of a state machine, or a top-level statistical state machine, as claimed. Nor is there any teaching in Konig of such a state machine with active behavioral clusters and an interaction between the active behavioral clusters, as claimed. Konig simply mentions that linked documents are evaluated with a user model to estimate user interest in them. Konig does not use a state machine or a top-level statistical state machine to do so. Nor does Konig teach using a top-level statistical state machine with active behavioral clusters and an interaction between the active behavioral clusters, to determine user interest in documents. Further, it appears that the Examiner has interpreted the user model in Konig to disclose the claimed limitations, however the Examiner has not provided any support in Konig for such interpretations.

Further, it is well settled that in order for a modification or combination of the prior art to be valid, the prior art itself must suggest the modification or combination, “...invention cannot be found obvious unless there was some explicit teaching or suggestion in the art to motivate one of ordinary skill to combine elements so as to create the same invention.” *Winner International*

Royalty Corp. v. Wang, No. 96-2107, 48 USPQ.2d 1139, 1140 (D.C.D.C. 1998) (emphasis added). “The prior art must provide one of ordinary skill in the art the motivation to make the proposed molecular modifications needed to arrive at the claimed compound.” *In re Jones*, 958 F.2d 347, 21 USPQ.2d 1941, 1944 (Fed. Cir. 1992) (emphasis added). Neither of the references suggests the motivation to modify or combine the references as proposed by the Examiner. Nor would one or ordinary skill in the art combine Grauch and Konig which are not only in non-analogous art, but also fail to teach the claimed limitations alone or in combination.

For at least these reasons, it is respectfully submitted the limitations in the rejected claims 6-7 are not disclosed by Grauch and Konig, alone or in combination. For the foregoing reasons, and other reasons, Applicant respectfully requests that the rejection of claim 6, and therefore rejected claim 7 depending therefrom, under 35 USC 103(a) should be withdrawn. If claims 6-7 are once again rejected, Applicant reserves the right to provide further arguments in support of allowability of claims 6-7.

Claim 14 was rejected for essentially the same reasons as rejection of claim 6. As per claim 14, as discussed above, Grauch does not disclose limitations of the base claim 8. Further, for at least the reasons provided above in relation to claim 14, it is respectfully submitted that rejection of claim 14 should be withdrawn.

As per claim 15, as discussed above, Grauch does not disclose limitations of the base claim 8. Further, it is respectfully submitted that Grauch does not disclose defining a plurality of dimensions, and determining parallel statistical state machine transition events in at least two of three state categories including channel, genre, and title, as claimed. In paragraph 95 (relied on by the Examiner), Grauch refers to Fig. 7 showing a sample merge of event records. There is no teaching or even mention in Grauch of a state machine, or determining parallel statistical state machine transition events, as claimed. Nor is there any mention in Grauch of determining parallel statistical state machine transition events in at least two of three state categories including channel, genre, and title, as claimed. Channel ID and content ID in Fig. 7 and paragraph 95 of Grauch have nothing to do with the claimed limitations. Further, as the Examiner also states, Grauch fails to disclose defining the double random process, as claimed. In col. 28, lines 17-18 (relied on by the Examiner), Konig mentions nothing about a double random process, or a double random process that is definable with a plurality of dimensions, and determining parallel statistical state machine transition events in at least two of three state categories including channel, genre, and title, as claimed. For at least these reasons, it is respectfully submitted that rejection of claim 15 should be withdrawn.

New Claims

New claim 16 add further limitations to claim 8, which are supported by the specification, and allowable for at least the reasons provided above.

CONCLUSION

For these, and other, reasons, Applicants believe that the claims are in condition for allowance. Reconsideration, re-examination, and allowance of all claims are respectfully requested. If it is believed that a telephone interview will help further the prosecution of this case, Applicants respectfully request that the undersigned attorney be contacted at the listed telephone number.

If necessary, the Commissioner is hereby authorized to charge payment or credit or any overpayment to Deposit Account No. 01-1960 for any additional fees required with respect to this filing. A duplicate copy of this page is enclosed for this purpose.

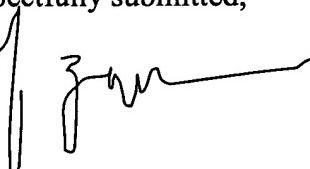
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